



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
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OFFICE OF THE ADMINISTRATOR
SCIENCE ADVISORY BOARD

April 30, 1993

EPA-SAB-DWC-COM-93-002

Honorable Carol M. Browner
Administrator
U.S. Environmental Protection Agency
401 M Street, SW
Washington, DC 20460

Subject: Science Advisory Board's Commentary on "Requirements for Nationwide Approval of New and Optionally Revised Methods for Inorganic and Organic Analyses in National Primary Drinking Water Regulations Monitoring"

Dear Ms. Browner:

On April 19, 1993, the Drinking Water Committee of EPA's Science Advisory Board (SAB) received a briefing concerning the "Requirements for Nationwide Approval of New and Optionally Revised Methods for Inorganic and Organic Analyses in National Primary Drinking Water Regulations Monitoring" (Revision 1.1, dated 4/14/93). This document was prepared by the Office of Research and Development and is often identified as the "Alternative Testing Procedure Protocol" (ATP). The Office of Groundwater and Drinking Water (OGWDW) had requested input from the SAB on this document late last year, and the Drinking Water Committee had received an earlier version (Revision 1.0, dated 7/7/92) before its meeting of February 1993, but had not been able to discuss it at that time. The overview of the ATP provided to the Committee included: a historical background of the activities of the Environmental Monitoring Systems Lab (EMSL-Cincinnati) with regard to water testing methods; a description of the two-tiered system in the ATP; general requirements of the application; and EMSL-Cincinnati's evaluation procedure. The Drinking Water Committee has decided on its own initiative to provide this commentary on the ATP.

From 1978 to-date, a total of 1250 alternative testing procedures were received by the US EPA under the mechanism promulgated in Section 141.27 of Title 40 of the Code of Federal Regulations (CFR). For drinking water, a total of 320 procedures have been approved, one hundred forty-four of them for nationwide use and 176 for limited use. Eighty-eight percent of these 320 were for chemical procedures.



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The US EPA is proposing to repeal this regulation and establish, in its place, a two-tiered system for rapid nationwide adoption of new and revised analytical methods for drinking water. The first tier is for any new method, significantly revised method, or a new application of a currently approved method. The second tier will cover optional minor modifications of an approved method.

The following are our findings and recommendations with regard to the ATP:

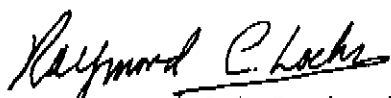
- a) The ATP requires the use of 10 drinking water sources (6 surface and 4 groundwater). This number is too small to adequately represent the nation's diversity in water quality and treatment conditions. There should be guidance as to the range of water qualities to be sampled and less emphasis based on the samples representing 10 regions of the country. The water quality variables should include pH, TOC (Total Organic Carbon), alkalinity, and TOX (Total Organic Halides), similar to those currently under consideration in the Regulatory Negotiation process for Disinfectants and Disinfection by-Products. For example, TOCs ranging from concentrations below 2mg/L to concentrations above 8 mg/L should be included. TOX ranging from 50 to 500 ug/L should be used when appropriate to challenge the proposed method.
- b) The ATP suggests testing methods at four concentrations. This number may be inappropriate in certain cases. The concentrations should include a level that is five times the method detection limit (MDL), a level that is two times the maximum contaminant level (MCL) and additional levels that take into account the dynamic range on a case-by-case basis.
- c) We are not clear how the ATP program may impact other methods-developing organizations (e.g., joint APHA/AWWA/WEF, ASTM).
- d) During the briefing, the possibility of performance-based standards for analytical methods was discussed, although changes along these lines are not currently under consideration for the proposed two-tiered ATP process. Developments along this line would have some potential advantages and we encourage them. However, we are concerned about the practical application of this approach across a wide variety of methods for an increasingly complex group of chemicals. Caution should be exercised in approving laboratory methods with detection capabilities very near the MCL, because their use may result in loss of valuable monitoring data at levels below the MCL, with little savings in cost or efficiency.

In general, facilitation of the ATP process should encourage the development and use of procedures which serve to improve the efficiency and reduce the cost of

contaminant analysis. We request, however, that the scientific merits of any changes to a performance-based standard approach be provided to the Committee with appropriate time for a detailed review of the approach and its potential impact on the industry.

The SAB appreciates the opportunity to assist and provide suggestions on issues such as these, which can eventually permit better monitoring strategies to be adopted by the Agency, and we look forward to your response to the comments contained in this letter.

Sincerely,



Dr. Raymond C. Loehr, Chair
Executive Committee
Science Advisory Board



Dr. Verne A. Ray, Chair
Drinking Water Committee
Science Advisory Board

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Commentary on Alternative Testing Protocol Procedure (ATP)

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